Title (en)

ADJUSTABLE CAMSHAFT, IN PARTICULAR FOR INTERNAL COMBUSTION ENGINES OF MOTOR VEHICLES, COMPRISING A HYDRAULIC ADJUSTING SYSTEM

Title (de)

VERSTELLBARE NOCKENWELLE, INSBESONDERE FÜR VERBRENNUNGSMOTOREN VON KRAFTFAHRZEUGEN, MIT EINER HYDRAULISCHEN STELLEINRICHTUNG

Title (fr)

ARBRE A CAMES AJUSTABLE, EN PARTICULIER POUR MOTEURS A COMBUSTION INTERNE DE VEHICULES, POURVU D'UN DISPOSITIF D'AJUSTEMENT HYDRAULIQUE

Publication

EP 1844216 B1 20091028 (DE)

Application

EP 06705778 A 20060113

Priority

- DE 2006000039 W 20060113
- DE 102005005212 A 20050203
- DE 102005040934 A 20050830

Abstract (en)

[origin: WO2006081789A1] An adjustable camshaft is characterised by the following features: at least one of the adjusting elements (6, 7) of the adjusting system (5) which are firmly secured to the two shafts (1, 2) lies tightly with at least part of its front face on a connection surface (8) which, relatively to the two shafts (1, 2), including the mounting ring (3), is formed by at least the mounting ring (3) of the outer shaft (1). The connection surface (8) is crossed by axial passages between hydraulic chambers of the adjusting system (5) and by hydraulic liquid supply ducts (9, 10, 11, 12) which extend through the shafts, between the shafts (1, 2) and/or through annular gaps (10IV, 11IV) formed between the outer shaft (1) and the mounting ring (3), from the connection surface (8) to filling zones which are located in the peripheral surface of the mounting ring (3) and open into circumferential ring-shaped channels (9", 10", 11", 12") associated each with a filling zone of a supply duct (9, 10, 11, 12).

IPC 8 full level

F01L 1/053 (2006.01); **F01L 1/34** (2006.01); **F01L 13/00** (2006.01)

CPC (source: EP US)

F01L 1/34 (2013.01 - EP US); **F01L 13/0057** (2013.01 - EP US)

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

WO 2006081789 A1 20060810; CN 1942657 A 20070404; CN 1942657 B 20100616; DE 102005040934 A1 20060817; DE 502006005236 D1 20091210; EP 1844216 A1 20071017; EP 1844216 B1 20091028; JP 2008528871 A 20080731; JP 4751402 B2 20110817; US 2007240657 A1 20071018; US 7513232 B2 20090407

DOCDB simple family (application)

DE 2006000039 W 20060113; CN 200680000085 A 20060113; DE 102005040934 A 20050830; DE 502006005236 T 20060113; EP 06705778 A 20060113; JP 2007553449 A 20060113; US 62943606 A 20060113